

Local Hazard Mitigation Plan Annex

City of Gilroy

Introduction

The City of Gilroy is a moderately-sized growing city in south Santa Clara County, California. The City has a population of 46,195 people, based on the State of California Department of Finance data. The City encompasses 16.182 square miles and is at the confluence of two main highways, U.S. 101, which extends through the City in a north/south route and SR 152, which extends in an east and west direction. Gilroy is located approximately 30 miles south of San Jose, CA. Last year, the City's general fund operating budget was \$37,511,687. Gilroy is a full-service City and employs 270 people in five departments: Police Services, Fire Services, Administration, Community Development and Community Services. In addition to local police services and fire services, the City also provides emergency medical services.

The Planning Process

The process of preparing this plan was familiar to the City of Gilroy. The City has a Safety Element to its General Plan, which was last updated in 2002. The Safety Element includes a discussion and goals and objectives for mitigating impacts from fire, seismic, flooding, and landslide hazards. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) in the development review process, which, since 1988, has required mitigation for identified natural hazards.

In developing this plan, the City's focus was to build on these pre-existing programs and to identify gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Many of the City activities conducted while preparing the plan were fed into the planning process for the multi-jurisdictional plan. The City participated in the ABAG general "kick-off" meeting. In addition, the City has provided written and oral comments on the multi-jurisdictional plan. The City has also provided ABAG information on its "critical" facilities, including building type, construction materials, age, content value, building value, etc. Finally, the City has incorporated this planning process into its monthly Emergency Operations Center Training meetings.

Key City staff met on three occasions to identify and prioritize mitigation strategies appropriate for the City. Staff involved in these meetings included the Community Development Director, Senior Building Plan Check Engineer, Senior Development Engineer, and the City's Emergency Management Coordinator. At the first meeting, the general priorities were identified. The second meeting identified preliminary budgets and potential funding sources for strategies. Finally, over a two week period, the staff met to discuss and prioritize the mitigation measures.

The City's Emergency Operations Center (EOC) Staff, who is comprised of the City Administrator, Police Chief, Fire Chief, Finance Director, Community Services Director,

Information Technology Director, Public Information Officer, Emergency Management Coordinator/Fire Captain, and Community Development Director, reviewed and approved the recommended mitigation strategies at their March 2005 monthly EOC meeting. Public comment on the draft plan was solicited during a City Council work session on April 4, 2005. An article regarding the City's preparation of the plan and disaster planning in general was in the April 1, 2005, edition of the local Gilroy Dispatch Newspaper. Finally, the City Council held an advertised public hearing on April 18, 2005, and after receiving public comment, formally approved the resolution endorsing the ABAG plan and approving the City's plan and strategies. The mitigation strategies will become an implementation appendix to this Safety Element.

Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which is an Annex, lists nine hazards that impact the Bay Area, five relate to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four relate to weather (flooding, landslides, wildfires, and drought). Except for tsunamis, these hazards also impact the City of Gilroy. As an inland City that is separated from the coast by the Santa Cruz Mountain range, the City of Gilroy would not be subject to tsunamis.

While the City has undertaken a number of general hazard mapping activities since the first Safety Element was prepared in the 1970s, all of these maps are less detailed and are not as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

In the last 20 years, the City has experienced two severe natural disasters, including the 1989 Loma Prieta earthquake and the 1986 floods. There was substantial public and private property damage associated with the Loma Prieta earthquake and limited private damage from the 1986 floods. Additional Information on disasters declared in Santa Clara County is at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of urban lands within its political boundaries based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 4,942 urban acres in the City:

- ◆ **Earthquake faulting** – There are three active faults that are within close proximity to the city so rupture of a fault is a direct concern. The San Andreas (Santa Cruz Section) and Sargent faults are located in the Santa Cruz Mountains to the west of the City, and the Central Calaveras fault is located due east of the City. The San Andreas Fault has produced two very large earthquakes in the last 100 years, including the 1906, 8+ (on the Richter scale) San Francisco and the 1989 Loma Prieta 7.1 earthquake. Moreover, there are 10 other active or potentially active faults in the region. The California Geological Survey is currently preparing more detailed mapping of the known faults in the Gilroy area.
- ◆ **Earthquake shaking** – 4,942 acres are in the second and third highest categories of shaking potential, in large part because the Calaveras fault and the San Andreas and Sargent Faults run to the west and east of the City, respectively.

- ◆ **Earthquake-induced landslides** – the California Geological Survey has not completed mapping of this hazard in the City of Gilroy. However, because few areas have been mapped as landslides, this hazard is viewed as similar to that posed by weather-related hazards.
- ◆ **Earthquake liquefaction** – 2,410 acres are in areas of moderate, high, or very high liquefaction susceptibility areas.
- ◆ **Tsunamis** – Due to the inland location, Tsunamis are not considered to be a hazard in the City of Gilroy.
- ◆ **Flooding** – 896 acres are in the 100-year flood plain, while an additional 3,190 acres are in other flood-prone areas.
- ◆ **Landslides** – 194 acres are in areas of existing landslides.
- ◆ **Wildfires** – 189 acres are subject to high or very high wildfire threat (because of the urban rural interface of the City's western perimeter), and 2,938 acres of urban land uses are in the wildland-urban interface threat areas.
- ◆ **Dam Inundation** – 3,788 acres are subject to dam inundation.
- ◆ **Drought** – all 4,942 urban acres within the city are subject to drought.

The City also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 161 miles of roadway in the City:

- ◆ **Earthquake faulting** – There are three active faults that within close proximity to the city so rupture of a fault is a direct concern. The San Andreas (Santa Cruz Section) and Sargent faults are located the Santa Cruz Mountains to the west of the City, and the Central Calaveras fault is located due east of the City. The San Andreas Fault has produced two very large earthquakes in the last 100 years: the 1906, 8+ (on the Richter scale) San Francisco and the 1989 Loma Prieta 7.1 earthquake. Moreover, there are 10 other active or potentially active faults in the region. The California Geological Survey is currently preparing more detailed mapping of the know faults in the Gilroy areas.
- ◆ **Earthquake shaking** – 148 miles of roadway in the city are in the second highest category of shaking and 13 miles are in the third highest category of shaking potential.
- ◆ **Earthquake-induced landslides** – the California Geological Survey has not completed mapping of this hazard in the City of Gilroy. However, this is unlikely to be a major concern because only 12 of the 161 miles of roadway in the City are located in areas defined as few existing landslide.
- ◆ **Earthquake liquefaction** – 76 miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility.
- ◆ **Tsunamis** – Due to the inland location, Tsunamis are not considered to be a hazard in the City of Gilroy.
- ◆ **Flooding** – 25 miles of roadway are in the 100-year flood plain, while an additional 93 miles of roadway are in other flood-prone areas.
- ◆ **Landslides** – 12 miles of roads are in areas of few existing landslides.
- ◆ **Wildfires** – 16 miles of roadway are subject to high or very high wildfire threat, and 96 miles of roads are in wildland-urban interface threat areas.
- ◆ **Dam Inundation** – 110 miles of roadway are in an area subject to dam inundation.

- ◆ **Drought** – is not a hazard for roadways.

Finally, the City examined the hazard exposure of critical health care facilities, schools, and city-owned buildings based on the information on ABAG's website at

<http://quake.abag.ca.gov/mitigation/pickcrit.html>. Of the critical facilities in the City,

- ◆ **Earthquake faulting** – There are three active faults that within close proximity to the city so rupture of a fault is a direct concern. The San Andreas (Santa Cruz Section) and Sargent faults are located the Santa Cruz Mountains to the west of the City, and the Central Calaveras fault is located due east of the City. The San Andreas Fault has produced two very large earthquakes in the last 100 years: the 1906, 8+ (on the Richter scale) San Francisco and the 1989 Loma Prieta 7.1 earthquake. Moreover, there are 10 other active or potentially active faults in the region. The California Geological Survey is currently preparing more detailed mapping of the known faults in the Gilroy areas.
- ◆ **Earthquake shaking** – All 13 schools, all 3 fire stations, and the City Hall are in the middle and second highest categories of shaking potential.
- ◆ **Earthquake-induced landslides** – the California Geological Survey has not completed mapping of this hazard in the City of Gilroy. However, this is unlikely to be a major concern because only five of the 77 City-owned critical facilities and one school are located within areas defined as few existing landslides in the City, and 12 school facilities, hospital facilities, bridges and highway/freeway interchanges are located in areas defined as very few or no existing landslides.
- ◆ **Earthquake liquefaction** – 5 health care facilities, 5 schools and 34 city-owned facilities are in areas of moderate, high, or very high liquefaction susceptibility areas.
- ◆ **Tsunamis** – Due to the inland location, Tsunamis are not considered to be a hazard in the City of Gilroy.
- ◆ **Flooding** – 27 city-owned critical facilities are in the 100-year flood plain and 5 health care facilities and 9 schools in other flood-prone areas.
- ◆ **Landslides** – Five city-owned facilities and one of the 12 school facilities are in areas of few existing landslides. All the remaining critical facilities are located in areas defined as very few or no existing landslides.
- ◆ **Wildfires** – 4 health care facilities, 8 schools and 31 city-owned facilities are in wildland-urban interface threat areas.
- ◆ **Dam Inundation** – 6 health care facilities, 9 schools, and 57 city-owned facilities are in an area subject to dam inundation;
- ◆ **Drought** – Drought will not affect city, school or hospital facilities directly. However, the city does operate a water-supply distribution system that could be affected.

In spite of the amount of area of the City that is located in flood-prone areas, there are only two repetitive loss properties in the City based on the information at

<http://quake.abag.ca.gov/mitigation/pickflood.html>.

Drought, though a potential problem in the City, is not fully assessed. However, the City has a water conservation program that was successfully implemented during the last prolonged drought in the 1980s. The program limited water usages and increased water rates to reduce overall water demands. Moreover, the City offers free showerheads and aerators to Gilroy residents and

businesses. The City also prepares and distributes public educational materials, such as the Water Conservation Brochure and partners with the Santa Clara County Water District on their programs, including home and business water conservation, drought tolerant landscaping, clothes washer rebate programs, etc. Finally, the City of Gilroy will be working with ABAG and the Santa Clara Valley Water District to further develop appropriate mitigations for prolonged drought conditions.

While the plan preparation and assessment of the City's vulnerabilities from all potential hazards was a valuable exercise, the City recognizes that, due to its seismically active and flood prone location, the greatest risks to public health, public and private buildings, infrastructure, and the environment is from earthquakes and floods. While numerous measures to lessen the impacts from these disasters have been implemented through programs, such as the development review processes (entitlement and building permit), creek levy reconstruction, etc., the City plans to continuing working with ABAG during 2005 and 2006 to improve the risk assessment information being compiled by ABAG, particularly on unreinforced masonry buildings and soft-story apartments located in the City. The City also plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities which might result from any of the hazards previously noted. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

In summary, as these impacts are not fully developed, the City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, wildfire, and to a lesser extent landslides (including unstable earth) pose a significant risk for potential loss.

Mitigation Activities and Priorities

As a participant in the ABAG multi-jurisdictional planning process, City of Gilroy staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. A multidisciplinary Task Force met and reviewed all of the mitigation strategies. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof City, but a disaster-resistant one. Many of these strategies are existing programs that are incorporated into the planning process through the development review, building and fire code enforcement, Emergency Operations Center training, and development of the City's General Plan. New activities identified as part of this Annex will be incorporated into these existing mechanisms. For example, at their annual retreat in January 2005, the City Council directed staff to develop new programs/regulations requiring mandatory retrofitting for URM buildings. The City Council may consider similar legislation for soft story buildings. Other activities, such as increased public education, Building Occupancy Resumption Programs (similar to the San Francisco Program) will require funds and

staff time that has not been identified. The City will be working to identify potential funding sources, including capital improvement budgets, bond issues, federal or state grants, etc. These draft priorities in this plan were submitted to the Gilroy Emergency Management Organization (as described in **The Planning Process**) on 03-02-05, the public during a City Council Work session on 04-04-05 and for formal adoption by the City Council on 04-18-05. Moreover, the City's draft Local Hazard Mitigation Plan was discussed at length in the local newspaper, the Gilroy Dispatch, article prior to the City Council Work session. The final strategies (as shown in the attached Table) will become an *Implementation Appendix* to the City's *Safety Element*.

Finally, the City examined the hazard exposure information to City-owned critical facilities supplied by ABAG. Although a number of the City's critical facilities are susceptible to earthquake shaking and liquefaction, most of these facilities are newer and should withstand moderate to severe earthquakes. The City will be remodeling two of its fire stations in the next year and will be completing any necessary seismic retrofitting at that time.

The Plan Maintenance and Update Process

The City of Gilroy Community Development Department will be responsible for ensuring that monitoring of this annex on an on-going basis will occur. However, the major disasters affecting our community, legal changes, notices from ABAG (as the lead agency in this process), and other triggers will be used as well. Finally, the Annex will be a discussion/work item on the City's Emergency Operations Center January meeting agenda each year, and department heads and other emergency preparedness staff, who serve in the City's Emergency Operations Center, will focus on evaluating the Annex in light of technological and political changes that occurred during the past year or other significant events. This group will be responsible for determining if the plan should be updated.

The City of Gilroy is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City's Director of Community Development will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the Santa Clara County Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics.